

L'OREAL SA

1999.03.29 1999-003890(+1999FR-003890) (2000.10.04) A61K 7/13

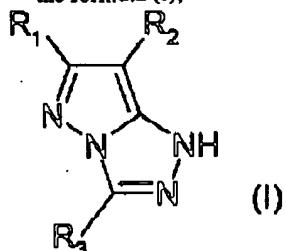
Composition for dyeing keratinous fibers includes two or more bases and at least one pyrazolo-(3,2-c)-1,2,4-triazoles coupler (Frn)
C2001-086542 R(AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI
LT LU LV MC MK NL PT RO SE SI)Addnl. Data: AUDOUSSET M
2000.02.29 2000EP-400545

*EP 1040818-A1

D(8-80) E(0-12), 0-12, 0-12, 1U-D1A2, 1U-D1A4, 1U-B3A, 26-A3, 26-C)

(b) one or more secondary base selected from N,N-bis-(β -hydroxyethyl)paraphenylenediamine, pyrazolo-[1,5-a]-pyrimidines and para-aminophenols;

(c) at least one pyrazolo-[3,2-c]-1,2,4-triazoles coupler represented by the formula (I):



R₁, R₃ = hydrogen, halogen, nitro, cyano, alkoxy, aryloxy, amino, alkylamino, acylamino, carbamoyl, sulfonamido, sulfamoyl, imido, alkylthio, arylthio, aryl, alkoxycarbonyl, an optionally

[EP 1040818-A+]

NOVELTY

A composition for dyeing keratinous fibers, particularly human hair, comprises a primary base selected from paraphenylenediamine and paratoluene diamine, one or more secondary base selected from N,N-bis-(β -hydroxyethyl)paraphenylenediamine, pyrazolo-[1,5-a]-pyrimidines and para-aminophenols and at least one pyrazolo-[3,2-c]-1,2,4-triazoles coupler (I).

DETAILED DESCRIPTION

A composition for dyeing keratinous fibers, particularly human hair, comprises:

(a) a primary base selected from paraphenylenediamine and paratoluene diamine;

branched 1-20C alkyl; aryl or a 5-6 membered heterocycle featuring a nitrogen, oxygen and/or sulfur atom. The alkyl, aryl and heterocyclic groups can be substituted in one or two positions by radicals selected from halogen, nitro, cyano, alkoxy, aryloxy, amino, alkylamino, acylamino, carbamoyl, sulfonamido, sulfamoyl, imido, alkylthio, arylthio, aryl, alkoxycarbonyl and acyl;

R₂ = hydrogen, halogen, acetyl amido, alkoxy, aryloxy, acyloxy, arylthio, alkylthio, heteroarylthio, heteroarylxyloxy, thiocyanato, N,N-diethylthiocarbonylthio, dodecylthiocarbonylthio, carbonylthio, benzenesulfonamido, N-ethyltoluenesulfonamido, pentafluorobutanamido, 2,3,4,5,6-pentafluorobenzamido, p-cyanophenylureido, N,N-diethyl-sulfamoylamido, pyrazolyl, imidazolyl, triazolyl, tetrazolyl, benzimidazolyl, 1-benzyl-5-ethoxy-3-hydantoinyl, 1-benzyl-3-hydantoinyl, 5,5-dimethyl-2,4-dioxo-3-oxazolidinyl, 2-oxo-1,2-dihydro-1-pyridinyl, alkylamido, arylamido or -N(R₆)(R₆);

R₆, R₆ = 1-4C (hydroxy)alkyl, carboxyl or alkoxycarboxyl. Salts of (a), (b) and/or (c) may be used.

USE

For dyeing keratinous fibers, particularly human hair (claimed).

ADVANTAGE

The composition provides a variety of strong, longer-lasting shades.

SPECIFIC COMPOUNDS

38 specific examples of the pyrazolo-[3,2-c]-1,2,4-triazoles coupler are claimed, including 3-methyl pyrazolo-[3,2-c]-1,2,4-triazole, 6-phenyl-3-ethyl-pyrazolo-[3,2-c]-1,2,4-triazole and 6-carboxy-3-phenyl-pyrazolo-[3,2-c]-1,2,4-triazole.

EXAMPLE

A dyeing composition comprised paraphenylenediamine (1 g), 3-amino-5-methyl-7-imidazolylpropylamino pyrazolo-[1,5-a]-pyrimidine 2HCl (3 g), 3,6-dimethylpyrazolo-[3,2-c]-1,2,4-triazole (1.2 g), 1-N-(β -hydroxyethyl)-4-hydroxy indole (1.2 g), ethanol (18 g) 58% aqueous ammonium thiocyanate (0.64 g), pentasodium diethylene triamine (10 g) and demineralized water (balance). The composition was applied to gray hair and rinsed off after 30 minutes to leave a red-brown color.

[EP 1040818-A+/1]

2001-283402/30

TECHNOLOGY FOCUS

Organic Chemistry - Preferred Components: The para-aminophenol secondary base is preferably selected from para-aminophenol, 4-amino-3-methylphenol, 4-amino-3-fluorophenol, 4-amino-3-hydroxymethylphenol, 4-amino-2-methylphenol, 4-amino-2-hydroxymethylphenol, 4-amino-2-methoxymethylphenol, 4-amino-2-aminomethylphenol, 4-amino-2-(β -hydroxyethylaminomethyl)phenol, 4-amino-2-fluorophenol and/or their salts.

(a), (b) and (c) can be salts selected from sodium, potassium, ammonium or amines.

The pyrazolo-[1,5-a]-pyrimidine secondary base is preferably selected from pyrazolo-[1,5-a]-pyrimidine-3,7-diamine, 2-methyl-pyrazolo-[1,5-a]-pyrimidine-3,7-diamine, 2,5-dimethyl-pyrazolo-[1,5-a]-pyrimidine-3,7-diamine, pyrazolo-[1,5-a]-pyrimidine-3,5-diamine, 2,7-dimethyl-pyrazolo-[1,5-a]-pyrimidine-3,5-diamine, 3-amino-pyrazolo-[1,5-a]-pyrimidin-7-ol, 3-amino-5-methyl-pyrazolo-[1,5-a]-pyrimidin-7-ol, 3-amino-pyrazolo-[1,5-a]-pyrimidin-7-ylamino)-ethanol, 3-amino-7- β -hydroxyethylamino-5-methyl-pyrazolo-[1,5-a]-pyrimidine, 2-(7-amino-pyrazolo-[1,5-a]-pyrimidin-3-ylamino)-ethanol, 2-(3-amino-

pyrazolo-[1,5-a]-pyrimidin-7-yl)-(2-hydroxyethyl)-amino]-ethanol, 2-(7-amino-pyrazolo-[1,5-a]-pyrimidin-7-yl)-(2-hydroxyethyl)-amino]-ethanol, 5,6-dimethyl pyrazolo-[1,5-a]-pyrimidine-3,7-diamine, 2,6-dimethyl pyrazolo-[1,5-a]-pyrimidine-3,7-diamine, 2,5, N-7, N-7-tetramethyl pyrazolo-[1,5-a]-pyrimidine-3,7-diamine and 3-amino-5-methyl-7-imidazolylpropylamino pyrazolo-[1,5-a]-pyrimidine.

Preferred Composition: The dyeing composition preferably comprises 0.005-6 wt.% of pyrazolo-[3,2-c]-1,2,4-triazole couplers. The composition additionally acid, neutral or alkaline oxidizing agents selected from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts, peracids and enzymes.
(19ppDwgNo.0/0)

[EP 1040818-A/2]

T0 7000-309517